

**DETAILED ACTION**

1. This communication is supplemental to the NOA dated 4/26/2011. The IDS dated 6/19/2008 is hereby considered.

***Response to Arguments***

2. Applicant's arguments filed on 3/23/2011 with respect to claims 1, 21 and 28 have been fully considered and are persuasive. The rejections of claims 1, 21, 28 and all the dependents claims have been withdrawn.

***Allowable Subject Matter***

3. Claims 1, 5-9, 11-14, 17-21, 24-28, 34-35 and 37-44 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

**Claims 1, 21 and 28** recite an acoustic telemetry apparatus for communicating digital data from a downhole location through a borehole to the surface, wherein the resonator has the specific structures to produce a phase shift of a carrier wave; wherein the resonator is switchable between a first state in which the valve closes access to the resonator and closes the downhole end of the acoustic channel and reflects the carrier wave and a second state in which the valve opens access to the resonator which closes the downhole end of the acoustic channel and reflects the carrier wave with a shift in phase relative to the reflection by said first state. Such combination is not taught, suggested or made obvious by the prior arts of record.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/  
Examiner, Art Unit 2835  
6/23/2011

/Brian A Zimmerman/  
Supervisory Patent Examiner, Art Unit 2612